

## **Engineering Design Review Panel**

### **Informal Fact Finding Conference**

March 9, 2010

Richmond, VA

5005 Laurel Lane, James City County

An informal fact finding conference was convened, in accordance with Code of Virginia 32.1-163.6, to hear the subject case. Panel members in attendance were Rick Blackwell III, P.E. representing VSPE; Joel Pinnix, P.E. representing the ACEC; John Schofield, P.E. representing VDH; and Gary Phillips, P.E. representing DEQ.

Representing VDH were Amy Pemberton; Donna Briede; John Aulbach, P.E.; Dr. Marcia Degen, P.E. and Jay Conta. Representing the appellant were Forest Meyers, P.E.; Bill Meagher; and Carl Peacock.

The system design consists of a Clearstream 600 gpd aerobic treatment unit (ATU) and a pumping system to an elevated drip mound providing a functional 18 inches of separation to the seasonal high water table elevation [the ground surface]. The VDH denial was based upon the following three reasons:

1. The design rate is not appropriate for the particular soil characteristics of the site.
2. The design does not address the potential for water mounding due to the restrictive nature of the underlying soils.
3. The Department does not agree that a “dry edge effect” is applicable on this site.

Amy Pemberton handed out a historical summary of events at the site (Attachment A). As indicated by Attachment A, the history of the site goes back to 2003 when a permit was denied due to “poor soils”. It was pointed out that the most recent application originally contained a trench located under the mound that provided a functional 12 inches of separation to the seasonal high water table. When VDH requested additional information on the trench, the most recent application (without the trench) was submitted. VDH requested that Jay Conta conduct analysis of the soil (Attachment B), and he generally found the soils denser than that reported by the appellant. Additionally, Jay Conta indicated that the dry edge effect did not influence this site as evidenced by the poor drainage of the immediately adjacent ditch. Based on Jay Conta’s soil analysis, the application was denied. Also, VDH conducted research on applications for permits on nearby lots and found approximately 20 sites that contained soils similar to that identified by Jay Conta at the site. VDH presented photos of alleged failing drip systems in the neighborhood (7621 Beachwood drive and 5048 River Drive).

Bill Meagher presented the Panel with the following handouts: correspondence with VDH (Attachment C), an aerial photo (Attachment D), a topo map (Attachment E), and

the site report/soils work (Attachment F). Carl Peacock indicated that the site is poorly drained in the near-surface soils and that the intention of the trench was to facilitate drainage at the site. Much of the presentation was discussion of the benefits of having a trench under the mound. Mr. Meagher indicated that the trench was removed from the design because of VDH's assertion that the effectiveness of the trench would have to be demonstrated for a period of one year prior to installation of the effluent distribution system. Dr. Degen indicated that VDH would be amenable to having the demonstration period coincide with the first year of operation of the onsite system.

The Engineering Design Review Panel hereby unanimously recommends to the State Health Commissioner that the permit denial in the 5005 Laurel Lane, James City County case stand; however, the Panel also recommended that the engineer resubmit the application with the inclusion of the trench (with justification) and a method of demonstrating that the system operates as designed.